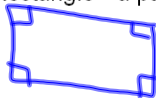
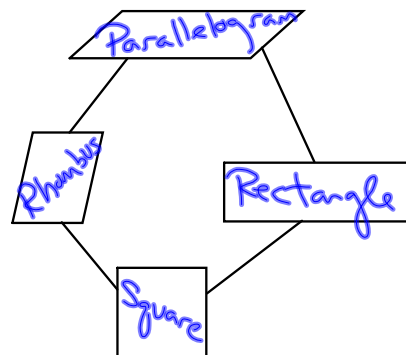
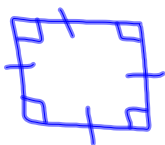
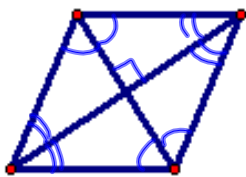


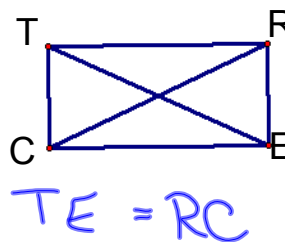
## 6.4 Rhombuses, Rectangles, and Squares

Rhombus—a parallelogram with 4  $\equiv$  sidesRectangle—a parallelogram with 4 right  $\angle$ sSquare—a parallelogram with 4  $\equiv$  sides and 4 right  $\angle$ s

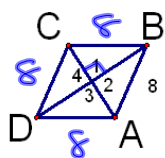
## Rhombus

Theorem 6.10—The diagonals of a rhombus are  $\perp$  and they bisect the angles.

## Rectangle

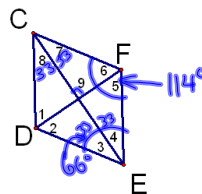
Theorem 6.11—The diagonals of a rectangle are  $\equiv$ .

## Rhombus ABCD



$$\begin{aligned} m\angle 1 &= 90 \\ m\angle 2 &= 90 \\ m\angle 3 &= 90 \\ m\angle 4 &= 90 \\ BC &= 8 \\ AD &= 8 \\ CD &= 8 \end{aligned}$$

## Rhombus CDEF



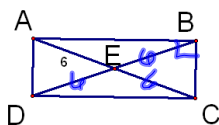
$$m\angle DEF = 66^\circ$$

$$\begin{array}{r} 180 \\ - 66 \\ \hline 114 \div 2 = 57^\circ \end{array}$$

$$\begin{aligned} m\angle 1 &= 57 \\ m\angle 2 &= 57 \\ m\angle 3 &= 33 \\ m\angle 4 &= 33 \\ m\angle 5 &= 57 \\ m\angle 6 &= 57 \\ m\angle 7 &= 33 \\ m\angle 8 &= 33 \\ m\angle 9 &= 90 \end{aligned}$$



## Rectangle ABCD



$$AC = BD$$

$$EC = 6$$

$$BE = 6$$

$$ED = 6$$

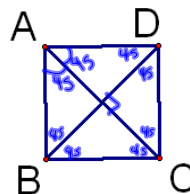
$$BD = 12$$

$$m\angle ABC = 90^\circ$$

$$m\angle BCD = 90^\circ$$

## Square ABCD

Fill in the missing angles.



List all of the properties that must be true for the given quadrilateral:

a. all sides are  $\cong$

b. all angles are  $\cong$

c. diagonals are  $\cong$

*Now*

d. opposite angles are  $\cong$

e. opposite sides are  $\cong$

f. consecutive angles are supplementary

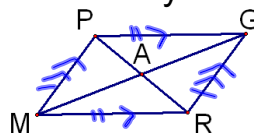
g. diagonals bisect each other

h. opposite sides are parallel

i. diagonals are perpendicular and bisect the angles

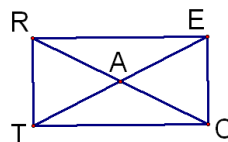
*Now*

## Summary



Parallelogram

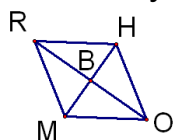
*h, e, g, d, f*



Rectangle

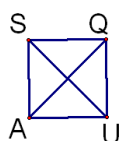
*h, e, g, d, f  
b, c*

## Summary



Rhombus

*h, e, g, d, f  
i, a*



Square

*a-i*

## Homework

p. 328-329

#s 1-12, 14-20